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ANNUAL REPORT
OF
THE MINES DIVISION
OF THE
Department of Mines and Minerals
OF THE
PROVINCE OF ALBERTA
1961

Edmonton:
Printed by L. S. Wall, Queen's Printer



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Edmonton, Alberta,
February 13th, 1962.

TO THE HONOURABLE ERNEST C. MANNING
Minister of Mines and Minerals

Sir:

I have the honour to submit the Annual Report of the Mines Division of the Department of Mines and Minerals for the year ending December 31st, 1961.

Respectfully submitted,
J. A. DUTTON,
Director of Mines,

ANNUAL REPORT OF THE MINES DIVISION FOR THE YEAR ENDING DECEMBER 31st, 1961

The output of coal from the mines in the province was 2,027,826 tons, with a valuation of \$10,471,217. Of this output 45,946 tons of coal were obtained from coal leases within the province of British Columbia, at a mining operation on the Alberta-British Columbia border. This shows a decrease of 376,267 tons, with a decrease in valuation of \$968,488 compared with the previous year. There were 32,092 tons used to make 34,534 tons of briquettes valued at \$357,939, 661 tons to make 491 tons of char valued at \$5,008 and 998 tons used in oil drilling fluids. This shows a decrease of 9,577 tons of briquettes made, with a decrease in valuation of \$102,101, a decrease of 725 tons of char with a decrease of \$10,328 compared with the previous year.

In addition to the above tonnages, there were 414 tons of coal reported as mined by the Blackfoot Indians, at Gleichen, for their own use.

The disposition of coal, briquettes and char was as follows:

	Coal	Briquettes	Char
Sold for consumption in Alberta	791,631	9,561	1
Sold for consumption in other provinces	750,082	15,398	—
Sold to the United States	18,066	45	—
Sold to Japan	343,720	—	—
Sold to railway companies	51,128	6,293	—
Used making briquettes	32,092	—	—
Used making char	661	—	—
Used under colliery boilers	3,851	2,330	221
Used by colliery railways	425	785	—
Put to stock	371,043	4,007	269
Put to waste	42,215	—	—

The above tonnages include lifted from stock and waste heaps which are not included in the total output.

There were 64 subsurface and strip mines which produced coal during the year, employing 1,323 men who worked 285,142 shifts. This shows a decrease of 5 mines, a decrease of 406 men and a decrease of 81,828 shifts, compared with the previous year. There were 34 strip mines in operation which produced 970,369 tons. This shows a decrease of 5 strip mines and a decrease of 213,481 tons from stripping operations, compared with the previous year.

The number of mines using electrical power during the year was 45. The following table shows the comparison of purchased electrical power in K.W. hrs. by mines for the past ten years.

1952	58,317,043	1957	29,110,288
1953	58,500,593	1958	20,574,436
1954	50,688,957	1959	25,159,068
1955	44,932,173	1960	26,231,225
1956	42,228,910	1961	21,694,596

The total horsepower of electrical motors in use was 35,480 h.p., a decrease of 334 h.p., in comparison with 1960.

The following table shows a breakdown of horsepower in use, both above and below ground.

Above Ground		Below Ground	
Duty	H.P.	Duty	H.P.
Hoisting	3,183	Pumping	1,748
Ventilation	1,151	Rope Haulage	435
Air Compressing	5,197	Conveying & Loading	1,212
Tipple & Coal Preparation Plants	10,159	Cutting & Drilling	2,999
Miscellaneous	7,326	Miscellaneous	2,070
Total	27,016	Total	8,464

The figures below show the trend in the use of certain types of electrical equipment underground in mines for the past ten years.

	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961
Cutting Machines	187	144	141	138	141	115	92	73	71	78
Battery Locomotives	47	42	42	42	43	36	31	26	22	25
Trolley Locomotives	31	27	25	23	24	22	21	18	8	10
Conveyors	83	50	41	45	55	46	45	38	30	33
Coal Drills	105	88	94	90	93	86	74	55	56	59
Face Loaders	12	10	10	10	9	12	13	13	15	17

Twenty-five quarries produced 1,635,711 tons of shale, clay, limestone, building stone and oil sands, an increase of 54,555 tons compared with the previous year.

Three hundred and fifty-nine inspections were made under the terms of The Coal Mines Regulation Act, 308 in connection with The Workmen's Compensation Board Regulations and 66 under The Quarries Regulation Act, totalling 733 inspections.

The total number of accidents reported was 21, all of which occurred in coal mines. The number of fatal accidents was 1 as compared with 2 in the previous year. This equals .493 fatals per million tons of coal produced.

All complaints made to the Division were investigated.

There were 4 prosecutions under The Coal Mines Regulation Act and conviction was obtained in each case.

Written examinations under The Coal Mines Regulation Act were held on June 6th, 7th and 8th at Edmonton and Calgary with successful candidates as follows: 2 examiners, 3 first class mine electricians, 2 managers (strip mine) and 3 foremen (strip mine).

Written examinations under The Quarries Regulation Act were held during the year and 5 candidates for foreman's certificate were successful. Five blasters' certificates were issued to successful candidates on oral examinations.

One examination was held for miners' certificates and 1 certificate was issued to a successful candidate. In addition, 11 substitute miners' certificates, 17 miners' provisional cer-

tificates and 61 miners' permits were granted, making a total of 90 certificates issued which is a decrease of 113 for the year.

Mr. A. L. Lister, Edmonton, who had been a District Inspector of Mines since June 2nd, 1947, retired on February 11th, 1961.

Mr. P. Melson, District Inspector of Mines, was transferred from Blairmore to Edmonton, and Mr. I. N. Potter, formerly manager of the mine operated by Federated Co-operatives Ltd., Drumheller, was appointed District Inspector of Mines with headquarters at Lethbridge. The District office at Blairmore was closed.

Alberta Coal Ltd., Wabamun, have assembled a new W-1350 Ransome & Rapier dragline and substation and feeder lines have been constructed. The dragline is expected to be put into operation during 1962.

Jet Construction Ltd., Ryley, replaced the section of their tippie that was lost by fire with a steel structure, installing a vibrator screen, slack belt and main conveyor belt.

Star-Key Mines Ltd., St. Albert, installed a 5 ton Atlas battery locomotive, three Little Giant coal drills, two permissible Jeffrey fans, 40 KVAR inerteen capacitors and a 25 H.P. duckbill unit.

Whitemud Creek Coal Co. Ltd., Edmonton, installed a 15 H.P. hoist, a 10 H.P. booster fan, one 5 H.P. and one 1 H.P. auxiliary fan, a 5 H.P. Sullivan hoist, a 5 H.P. pump and 40 KVAR inerteen capacitors.

The Canmore Mines Limited, Canmore, installed one H-70 Hough Payloader, one 3 ton link chain lift hoist, one chain conveyor and pans, two Joy rock drills, three transformers and one exhaust fan.

Ajax Coal Company, Medicine Hat, installed a G 12½ Goodman duckbill shaker conveyor.

Lethbridge Collieries Limited, Shaughnessy, installed two spiral cleaners for nut and stoker coal, a 5 H.P. scraper chain conveyor for stoker coal, a 3 H.P. belt conveyor, one 8 B.U. - 15 H.P. Joy Loader, four 12 B.U. - 20 H.P. Joy loaders two 20 H.P. Goodman Mancha battery locomotives and one Hertner generator set.

THE MINES DIVISION

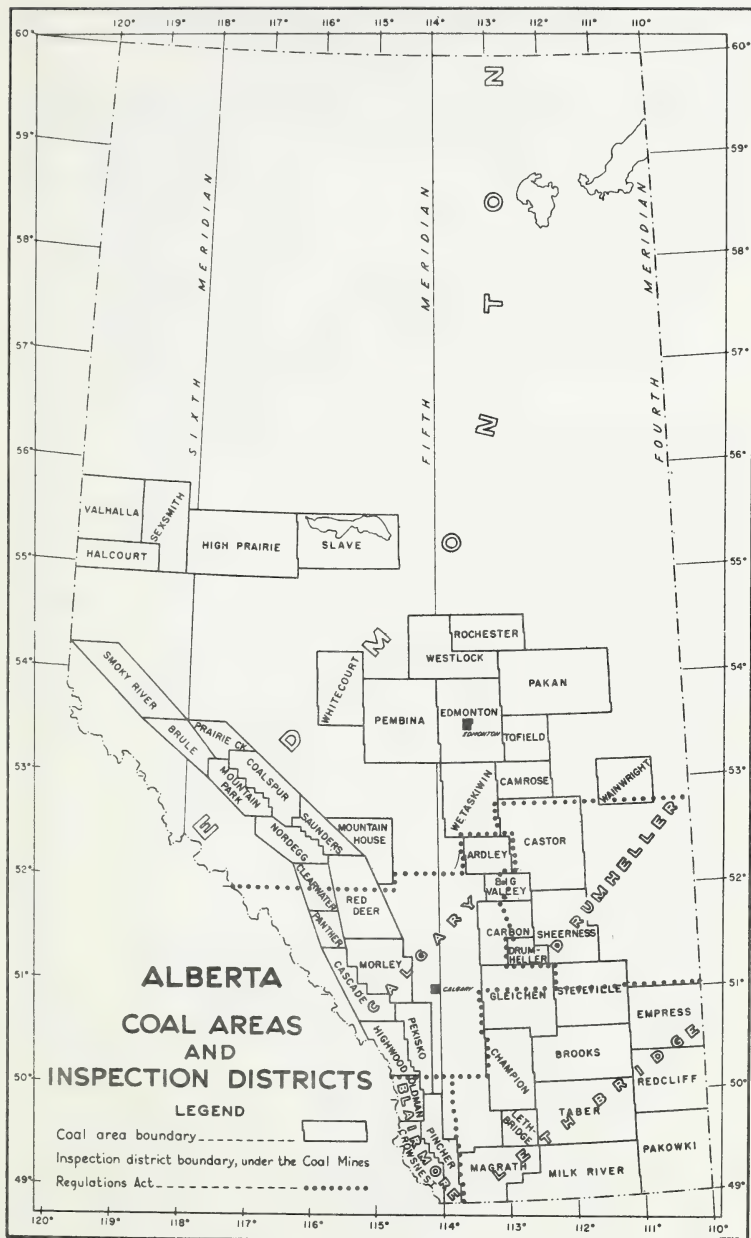
NUMBER OF MINES OPERATED, OPENED AND ABANDONED
DURING THE YEAR ACCORDING TO AREAS AND KIND OF COAL

Director of Mines - J.A. Dutton, Natural Resources Building,
Edmonton, Alberta. Telephone - CA 9-3802.

Assistant Director of Mines - J.D.B. Brown, Natural Resources
Building, Edmonton, Alberta. Telephone - CA 9-3803.

Electrical Inspector of Mines - J.S. Watson, Natural Resources
Building, Edmonton, Alberta. Telephone - CA 9-3806.

Inspection District	Area	Area Number	Character of Coal	No. of Mines operating during the year.	No. of Mines opened during the year.	No. of Mines abandoned during the year.	Name and Address of District Inspectors of Mines
Calgary	Ardley	1	Sub-bituminous	3	...	...	J.J. Kubin, Provincial Bldg., 101 - 8th Ave S.E. Calgary, Alta. Tel. Altherst 9-6687
	Carbon	6	Sub-bituminous	5	...	2	
	Cascade	7	Bituminous	1	...	...	
	Gleichen	17	Sub-bituminous	2	...	...	
Drumheller	Castor	8	Sub-bituminous	9	...	...	R. Shaw, Provincial Bldg., Centre St & 2nd Ave., Drumheller, Alta. Tel. Valley 3-2413.
	Drumheller	14	Sub-bituminous	8	...	2	
	Sheerness	38	Sub-bituminous	1	...	...	
Edmonton	Camrose	5	Sub-bituminous	2	...	...	P. Melson, Room 307, Natural Resources Bldg., Edmonton, Alta. Tel. Capital 9-3805
	Coalspur	11	Bituminous	1	...	1	
	Edmonton	15	Sub-bituminous	5	...	1	
	Halcourt	18	Sub-bituminous	1	...	...	
	Pembina	31	Sub-bituminous	4	...	...	
	Tofield	42	Sub-bituminous	3	...	...	
	Westlock	45	Sub-bituminous	3	...	...	
	Wetaskiwin	46	Sub-bituminous	1	...	...	
	Whitcourt	47	Sub-bituminous	1	...	...	
Lethbridge	Brooks	3	Sub-bituminous	2	...	...	I.N. Potter, Administration Bldg., 909 - 3rd Ave. N., Lethbridge, Alta. Tel. FAirfx 8-4471 Local 529
	Champion	9	Sub-bituminous	2	...	...	
	Crowsnest	12-13	Bituminous	6	2	...	
	Lethbridge	20	Bituminous	2	...	...	
	Redcliff	34	Sub-bituminous	1	...	...	
	Taber	41	Sub-bituminous	1	...	...	
	Total.....	...		64	2	6	



PARTICULARS WITH REFERENCE TO THE COAL MINING INDUSTRY IN THE
PROVINCE OF ALBERTA DURING THE YEAR ENDING DECEMBER 31, 1961.

SUMMARY OF STATISTICS

Number of tons of coal produced.....	2,027,826
Total valuation of coal produced.....	\$ 10,471,217
Number of tons of briquettes made.....	34,534
Total valuation of briquettes made.....	\$ 357,939
Number of tons of char produced.....	491
Total valuation of char produced.....	\$ 5,008
Number of mines in operation.....	64
Number of mines opened.....	2
Number of mines abandoned.....	6

20 mines or 31.25% of the total operating produced	0.30% of the output
11 mines or 17.19% of the total operating produced	1.57% of the output
7 mines or 10.94% of the total operating produced	2.78% of the output
17 mines or 26.56% of the total operating produced	18.12% of the output
2 mines or 3.12% of the total operating produced	7.33% of the output
1 mine or 1.56% of the total operating produced	6.95% of the output
3 mines or 4.69% of the total operating produced	24.44% of the output
3 mines or 4.69% of the total operating produced	38.51% of the output

Average number of persons employed above ground.....	352
Average number of persons employed below ground.....	711
Average number of persons employed at strip mining.....	260
Average number of days worked.....	187
Total number of manshifts.....	285,142
Number of separate accidents causing loss of life.....	1
Number of fatal accidents above ground.....	1
Number of fatal accidents below ground.....	...
Number of serious accidents above ground.....	3
Number of serious accidents below ground.....	6
Number of slight accidents above ground.....	2
Number of slight accidents below ground.....	9
Total purchased electric power (kilowatt hours).....	21,694,596
Number of prosecutions instituted.....	4
Number of trade name certificates issued.....	11
Number of provisional second class certificates issued.....	15
Number of provisional third class certificates issued.....	1
Number of provisional electricians' certificates issued.....	1
Number of provisional foremen's certificates issued.....	18
Number of provisional blasters' certificates issued.....	...
Number of provisional miners' certificates issued.....	17
Number of miners' permits issued.....	61
Number of miners' certificates issued.....	1
Number of second class certificates issued.....	...
Number of third class certificates issued.....	2
Number of first class mine electricians' certificates issued.....	3
Number of second class mine electricians' certificates issued.....	...
* Number of managers' certificates issued.....	2
* Number of foremen's certificates issued.....	3
* Number of blasters' certificates issued.....	2
Number of first class certificates issued up to Dec. 31/61.....	313
Number of second class certificates issued up to Dec. 31/61.....	624
Number of third class certificates issued up to Dec. 31/61.....	1,858
Number of mine surveyors' certificates issued up to Dec. 31/61.....	249
Number of first class mine electricians' certificates issued up to Dec. 31/61.....	173
Number of second class mine electricians' certificates issued up to Dec. 31/61.....	136
Number of managers' certificates (strip mine) issued up to Dec. 31/61.....	165
Number of foremen's certificates (strip mine) issued up to Dec. 31/61.....	236
Number of blasters' certificates (strip mine) issued up to Dec. 31/61.....	25
Number of miners' certificates issued up to Dec. 31/61.....	20,988

* Strip Mine Certificates

PARTICULARS WITH REFERENCE TO QUARRIES IN THE
PROVINCE OF ALBERTA DURING THE YEAR ENDING DECEMBER 31, 1961.

SUMMARY OF STATISTICS

Number of tons of shale, clay and bentonite produced.....	580,216
Number of tons of limestone and building stone produced.....	1,027,884
Number of tons of oil-sands produced.....	27,611
Number of quarries in operation.....	25
Number of quarries opened.....	5
Number of quarries abandoned.....	4
Number of persons employed.....	147
Average number of days worked.....	101
Total number of manshifts.....	24,028
Number of pounds of explosives used.....	138,567
Number of pounds of ammonia nitrate used.....	105,276
Number of detonators used.....	15,478
Number of shots fired.....	10,640
Number of primers used.....	1,217
Number of missed fire shots.....	4
Amount of prima cord used (feet).....	17,110
Number of provisional foremen's certificates issued.....	14
Number of managers' certificates issued.....	...
Number of foremen's certificates issued.....	5
Number of blasters' certificates issued.....	5
Number of managers' certificates issued up to December 31st, 1961.....	19
Number of foremen's certificates issued up to December 31st, 1961.....	33
Number of blasters' certificates issued up to December 31st, 1961.....	58

THE MINES DIVISION

**ANNUAL PRODUCTION AND VALUATION OF COAL FROM MINES
IN THE PROVINCE OF ALBERTA
For the Years 1942 to 1961 Inclusive**

Year	Output Tons	Valuation Dollars
1942.....	7,754,279	\$ 22,562,352
1943.....	7,677,982	22,624,410
1944.....	7,427,433	26,741,357
1945.....	7,801,248	27,699,333
1946.....	8,824,455	33,197,261
1947.....	8,074,596	36,317,343
1948.....	8,111,013	41,875,044
1949.....	8,616,983	44,541,538
1950.....	8,118,206	41,631,579
1951.....	7,661,276	41,000,953
1952.....	7,194,472	39,974,318
1953.....	5,917,423	32,158,435
1954.....	4,859,136	26,349,275
1955.....	4,456,578	23,486,399
1956.....	4,329,639	22,283,966
1957.....	3,155,354	17,287,229
1958.....	2,519,939	12,778,111
1959.....	2,549,517	12,892,747
1960.....	2,404,093	11,439,705
1961.....	2,027,826	10,471,217

**PER CAPITA PRODUCTION OF MINES IN THE PROVINCE
For the Years 1942 to 1961 Inclusive**

Year	Gross Tons of coal mined	Total Average No. of men employed	Tons of coal mined per man employed	Average No. of employed men underground	Tons of coal mined per man employed underground
1942...	7,754,279	3,040	964	5,865	1,322
1943...	7,677,982	8,636	889	6,197	1,160
1944...	7,427,433	8,375	887	5,867	1,135
1945...	7,801,248	8,309	939	5,752	1,298
1946...	8,824,455	8,583	1,028	5,897	1,187
1947...	8,074,596	8,772	920	6,090	1,017
1948...	8,111,013	8,865	915	5,702	946
1949...	8,616,983	8,682	993	5,534	1,025
1950...	8,118,206	7,999	1,015	4,990	1,006
1951...	7,661,276	7,339	1,044	4,457	1,084
1952...	7,194,472	6,936	1,037	4,211	1,070
1953...	5,917,423	5,760	1,027	3,386	998
1954...	4,859,136	4,719	1,030	2,733	999
1955...	4,456,578	3,801	1,172	2,198	1,070
1956...	4,329,639	3,443	1,258	1,963	1,185
1957...	3,155,354	2,795	1,129	1,634	1,084
1958...	2,519,939	2,021	1,247	1,146	1,111
1959...	2,549,517	1,720	1,482	960	1,391
1960...	2,404,093	1,729	1,390	1,007	1,212
1961...	2,027,826	1,323	1,533	711	1,487

CLASSIFICATION OF OUTPUT DURING THE YEARS 1942 to 1961 INCLUSIVE

Year	Bituminous	Sub-bituminous	Domestic	Coal used in Coke Production	Tons of Briquettes made	Tons of Coke made
1942.....	3,807,619	733,547	3,213,113	107,410	197,905	71,572
1943.....	3,469,993	791,952	3,416,037	101,132	222,106	67,348
1944.....	3,551,205	729,127	3,116,801	101,633	253,592	67,821
1945.....	4,600,763	3,200,485	...	64,280	250,274	143,180
1946.....	5,369,596	3,434,959	...	81,128	275,646	143,206
1947.....	4,637,376	3,237,220	...	76,795	282,898	52,627
1948.....	4,920,796	3,190,217	...	91,361	321,574	45,718
1949.....	5,495,327	3,121,556	...	23,079	460,643	54,922
1950.....	4,793,020	3,325,186	...	6,957	409,955	16,637
1951.....	4,659,289	3,001,287	...	3,474	345,768	3,959
1952.....	4,378,622	2,815,950	...	...	661,862	574
1953.....	3,517,499	2,399,924	...	...	665,556	...
1954.....	2,402,165	2,456,951	...	...	635,501	...
1955.....	2,114,892	2,341,686	...	...	435,785	...
1956.....	2,064,723	2,264,316	...	...	525,202	...
1957.....	1,265,844	1,889,510	...	...	265,645	...
1958.....	834,256	1,668,683	...	...	128,512	...
1959.....	814,819	1,734,698	...	...	99,499	...
1960.....	863,517	1,540,576	...	* 2,352	44,111	* 1,216
1961.....	666,226	1,361,600	...	* 661	34,534	* 491

* Chart

Amount of Coal Sold During the Years 1912 to 1961 Inclusive for Consumption in:

Year	Railways	Alberta	B.C.	Sask.	Manitoba	Ontario	Quebec	U.S.A.	China and Japan	Total
1912.....	2,864,586	1,174,795	652,222	1,269,669	580,336	231,258	...	98,137	...	7,171,063
1913.....	2,098,535	1,560,212	864,911	1,455,612	627,368	1,190	...	144,627	...	* 7,071,753
1914.....	2,593,101	1,424,293	678,960	1,225,075	533,027	10,163	...	267,728	...	* 6,742,613
1915.....	2,416,803	1,567,940	868,396	1,242,001	511,882	278,814	...	162,698	...	* 7,098,928
1916.....	2,493,207	1,608,296	982,413	1,449,002	658,733	348,137	...	437,271	37,865	* 8,136,694
1917.....	2,504,604	1,671,130	899,413	1,475,006	583,411	162,898	...	91,235	12,192	* 7,433,989
1918.....	2,312,273	1,593,629	945,703	1,413,983	695,009	202,520	58	84,495	200,947	* 7,377,914
1919.....	3,042,425	1,614,306	891,122	1,232,890	624,456	187,276	...	145,972	3,475	7,617,632
1920.....	2,508,585	1,672,519	873,558	1,366,723	586,920	312,563	...	105,765	...	7,226,413
1921.....	2,443,326	1,427,114	896,533	1,322,162	492,737	186,751	...	80,270	44,317	6,891,212
1922.....	2,085,365	1,234,307	1,021,484	1,214,716	384,924	126,361	...	71,817	1,588	6,447,562
1923.....	1,695,783	1,045,482	859,385	1,034,594	274,758	73,117	...	47,119	...	4,960,238
1924.....	713,743	1,064,817	891,164	995,882	292,455	85,636	...	33,124	...	4,107,051
1925.....	431,639	1,080,379	932,764	893,377	293,719	90,727	...	32,941	...	3,755,516
1926.....	385,388	1,020,538	860,329	871,719	304,918	75,029	120	15,692	...	3,563,733
1927.....	152,695	876,395	672,527	680,297	247,480	68,379	165	46,079	40,745	2,784,760
1928.....	56,420	838,535	532,911	584,295	226,302	54,887	122	37,154	21,952	2,352,308
1929.....	39,122	874,622	437,118	519,663	239,503	52,828	80	33,455	124,719	2,351,110
1930.....	1,015	845,806	379,668	362,383	201,372	40,305	157	30,283	361,336	2,222,355
1931.....	51,128	791,631	321,909	232,848	159,744	35,466	115	18,066	343,720	1,954,627

* NOTE: Included in the above totals are the following tonnages:

Ships Bunkers

1943.....	49,298
1944.....	20,296
1945.....	20,394
1946.....	21,770
1947.....	4,107

Coal Produced by Years from 1957 to 1961

BITUMINOUS COAL FIELD

Areas	1957	1958	1959	1960	1961
Group 1:					
Cascade.....	203,993	128,922	179,985	210,061	230,058
Group 2:					
Crowsnest.....	644,930	445,151	440,005	533,350	352,665
Mountain Park...	...	1,121	...	...	...
Group 3:					
Coalspur.....	317,885	227,982	144,724	1,983	4,916
Halcourt.....	168	441	134	216	360
Lethbridge.....	97,359	59,565	79,971	117,907	78,227
Pekisko.....	4,509	1,074	...	...	...
Total.....	1,265,844	834,256	814,819	863,517	666,226

SUB-BITUMINOUS COAL FIELD

Group 4:					
Ardley.....	45,334	43,411	43,688	44,713	41,320
Big Valley.....	713	122	...	...	...
Brooks.....	19,206	14,788	12,758	10,201	8,660
Carbon.....	37,266	34,814	32,952	24,304	19,518
Champion.....	6,729	7,212	7,188	6,236	5,188
Drumheller.....	763,673	590,860	571,154	467,517	382,576
Edmonton.....	141,208	119,682	122,595	101,403	89,928
Gleichen.....	5,579	4,927	4,159	2,870	2,372
Pembina.....	115,682	93,134	117,458	79,486	56,133
Taber.....	35,378	27,415	40,219	54,564	45,035
Wetaskiwin.....	1,499	3,000	4,634	4,088	3,190
Whitcourt.....	294	245	102	106	68
Group 5:					
Canrose.....	35,550	33,761	33,592	30,997	28,212
Castor.....	478,808	535,497	541,324	499,217	482,861
Redcliff.....	3,816	3,302	2,915	3,079	2,398
Sheerness.....	154,559	136,907	167,051	179,437	155,967
Tofield.....	35,346	27,689	23,684	19,052	20,163
Westlock.....	8,868	8,917	9,225	13,306	18,011
Total.....	1,889,510	1,685,683	1,734,698	1,540,576	1,361,600

THE MINES DIVISION

How the total Output of BITUMINOUS COAL from the Province was disposed of by areas during 1961

Area	Sold for Consumption in:									Total Sales	Used making Char	Used under Colliery Boilers	Used by Colliery Railway	Put to Stock	Put to Waste	Lifted from Stock	Lifted from Waste	Total Output
	Sold to Railway Companies	Alberta	British Columbia	Sask.	Manitoba	Ontario	Quebec	United States	Japan									
Group 1: Cascade	646	984	16282	787	2382	21108	...	8243	157081	207513	24902	1458	425	118318	...	117639	4919	230058
Group 2: Crowsnest	96	13417	115015	37	10345	2310	...	9067	186639	336926	7851	327	...	208187	3032	203658	...	352665
Group 3: Coalspur	...	...	4916	...	...	...	...	...	...	4916	...	...	...	...	...	...	...	4916
Calcourt	...	360	...	...	...	...	...	...	...	360	...	...	...	...	...	...	...	360
Lehrbidge	...	31399	35689	4552	334	4500	...	201	...	76655	...	1242	...	13694	315	13325	354	78227
Total:	742	46160	171902	5356	13061	27918	...	17511	343720	626370	32753	3027	425	340199	3347	334622	5273	666226

How the total Output of SUB-BITUMINOUS COAL from the Province was disposed of by areas during 1961

Areas	Sold for Consumption in:								Total Sales	Used under Colliery Boilers	Put to Stock	Put to Waste	Lifted from Stock	Lifted from Waste	Total Output
	Sold to Railway Companies	Alberta	British Columbia	Sask.	Manitoba	Ontario	Quebec	United States							
Group 4:															
Ardley	...	40633	...	...	...	...	...	...	40633	...	...	687	...	...	41320
Brooks	...	8660	...	...	...	...	...	...	8660	...	...	...	...	...	8660
Carbon	...	18976	...	...	...	...	...	...	18976	...	30	512	...	...	19518
Champion	...	5118	...	...	...	...	...	...	5118	...	...	70	...	...	5188
Drumheller	2745	134825	77690	127198	39238	6510	115	...	388321	551	29512	1117	36636	289	382576
Edmonton	...	89944	181	...	...	748	...	...	89873	55	...	...	...	...	89928
Gleichen	...	2372	...	...	...	...	...	...	2372	...	...	...	...	...	2372
Grimba	...	44928	9434	1072	322	...	...	...	96133	...	...	...	...	...	96133
Highgate	...	1377	20579	134	2363	82	...	...	45035	...	...	...	...	...	45035
Watkins	...	3120	...	...	...	...	...	...	3120	...	...	...	...	...	3120
Whitecourt	...	68	...	...	...	...	...	...	68	...	...	...	...	...	68
Group 5:															
Camrose	...	26958	...	...	...	...	...	...	26958	...	...	1254	...	...	28212
Castor	22137	301857	39929	54368	61261	41	...	...	480148	210	302	1203	...	...	482861
Redcliff	...	2201	...	...	...	...	...	...	2201	...	...	197	...	...	2398
Sheerness	...	19273	2194	44424	43360	126	...	...	125904	...	...	30063	...	...	155967
Torfield	16527	17895	...	296	119	41	...	...	18341	...	...	...	...	...	20163
Westlock	...	16326	...	...	...	...	...	...	16326	8	1000	1943	1266	...	18011
Total:	50386	745471	150007	227492	146683	7548	115	555	1328257	824	30844	38868	37902	289	1361600

Included in the above Output in Castor area, 998 tons used in Oil Drilling Fluids.

How the total Output of COAL from the Province was disposed of by months during 1961

Months	Sold for Consumption in:									Total Sales	Used making and Char	Used under Col- lery Boilers	Used by Col- lery Railway	Put to Stock	Put to Waste	Lifted from Stock	Lifted from Waste	Total Output
	Sold to Railway Companies	Alberta	British Columbia	Sask.	Manitoba	Ontario	Quebec	United States	Japan									
January	6847	93053	11534	33621	21517	5920	140	1987	16710	221659	3124	1482	...	54717	6821	50487	1482	238004
February	7027	81058	23600	16496	16331	3966	...	1150	20309	173677	3153	1444	...	55661	5065	59276	216	178608
March	5596	54474	25752	7715	19122	2690	37	1985	26645	134016	2171	206	...	49277	2216	53300	41	135031
April	5292	31245	20508	3797	2692	1081	...	1676	38469	104070	2004	206	...	43075	1070	49412	545	101068
May	2669	11204	19334	3336	1166	704	...	2523	28597	76535	1591	328	...	22848	719	3924	685	97412
June	555	12712	17150	2102	1313	893	...	1783	32110	66688	1288	112	...	22848	323	17134	779	88494
July	884	11392	10393	368	310	767	...	1637	24560	53331	1612	150	...	13103	25	17262	608	50426
August	753	22813	18533	6709	4083	2092	...	1962	24057	61037	2095	115	...	25144	62	13461	617	94160
September	3997	75010	26508	40529	23377	4723	...	1092	38603	213539	3215	265	...	19624	14028	21160	176	219130
October	9069	115995	37991	90886	30280	4704	...	710	42153	295768	4051	362	...	9665	9016	28031	...	290901
November	4310	122821	39721	30818	21504	4843	...	601	29669	254317	4338	342	...	45	6033	17035	...	255668
December	3694	112794	40775	36169	25109	3063	38	620	21808	271370	3211	602	...	5975	6138	11762	190	278424
Total:	51128	791631	321909	232848	159744	39466	115	18066	343720	1954627	33751	3851	125	371043	42215	372544	5562	2027826
% of Total Sales	2.62	40.50	16.46	11.91	8.17	1.81	0.01	0.92	17.60									

How the total Output of BRIQUETTES from the Province was disposed of during 1961

Months	Sold for Consumption in:										Total Sales	Used making and Char	Used under Col- lery Boilers	Used by Col- lery Railway	Put to Stock	Put to Waste	Lifted from Stock	Lifted from Waste	Total Output	
	Sold to Railway Companies	Alberta	British Columbia	Sask.	Manitoba	Ontario	Quebec	United States	Japan											
January	6847	93053	11534	33621	21517	5920	140	1987	16710	221659	3124	1482	383	...	54717	6821	50487	1482	238004	
February	7027	81058	23600	16486	16331	3966	...	1150	20309	173677	3153	1444	383	...	55661	5065	59276	216	178608	
March	5596	54474	25752	77415	19222	2690	37	1985	265415	134016	2171	206	206	...	49277	2216	53300	41	135031	
April	5292	31245	20508	3797	2692	1081	...	1676	38469	104070	2004	206	206	...	43075	1070	49412	545	101068	
May	2669	11204	19334	3336	1166	704	...	2523	28597	76535	1591	328	328	...	22848	719	3924	685	97412	
June	555	12712	17150	2102	1313	893	...	1783	32110	66688	1288	112	112	...	22848	323	17134	779	88494	
July	884	11392	10393	368	310	767	...	1637	24560	53331	1612	150	150	...	13103	25	17262	608	50426	
August	753	22813	18533	6709	4083	2092	...	1962	24057	61037	2095	115	115	...	25144	62	13461	617	94160	
September	3997	75010	26508	40529	23377	4723	...	1092	38603	213539	3215	265	265	...	19624	14028	21160	176	219130	
October	9069	115995	37991	90886	30280	4704	...	710	42153	295768	4051	362	362	...	9665	9016	28031	...	290901	
November	4310	122821	39721	30818	21504	4843	...	601	29669	254317	4338	342	342	...	45	6033	17035	...	255668	
December	3694	112794	40775	36169	25109	3063	38	620	21808	271370	3211	602	602	...	5975	6138	11762	190	278424	
Total:	51128	791631	321909	232848	159744	39466	115	18066	343720	1954627	33751	3851	3851	125	371043	42215	372544	5562	2027826	
% of Total Sales	2.62	40.50	16.46	11.91	8.17	1.81	0.01	0.92	17.60											

How the total Output of CHAR from the Province was disposed of during 1961

Char	Sold for Consumption in:										Total Sales	Used making and Char	Used under Col- lery Boilers	Used by Col- lery Railway	Put to Stock	Put to Waste	Lifted from Stock	Lifted from Waste	Total Output	
	Sold to Railway Companies	Alberta	British Columbia	Sask.	Manitoba	Ontario	Quebec	United States	Japan											
January	6847	93053	11534	33621	21517	5920	140	1987	16710	221659	3124	1482	383	...	54717	6821	50487	1482	238004	
February	7027	81058	23600	16486	16331	3966	...	1150	20309	173677	3153	1444	383	...	55661	5065	59276	216	178608	
March	5596	54474	25752	77415	19222	2690	37	1985	265415	134016	2171	206	206	...	49277	2216	53300	41	135031	
April	5292	31245	20508	3797	2692	1081	...	1676	38469	104070	2004	206	206	...	43075	1070	49412	545	101068	
May	2669	11204	19334	3336	1166	704	...	2523	28597	76535	1591	328	328	...	22848	719	3924	685	97412	
June	555	12712	17150	2102	1313	893	...	1783	32110	66688	1288	112	112	...	22848	323	17134	779	88494	
July	884	11392	10393	368	310	767	...	1637	24560	53331	1612	150	150	...	13103	25	17262	608	50426	
August	753	22813	18533	6709	4083	2092	...	1962	24057	61037	2095	115	115	...	25144	62	13461	617	94160	
September	3997	75010	26508	40529	23377	4723	...	1092	38603	213539	3215	265	265	...	19624	14028	21160	176	219130	
October	9069	115995	37991	90886	30280	4704	...	710	42153	295768	4051	362	362	...	9665	9016	28031	...	290901	
November	4310	122821	39721	30818	21504	4843	...	601	29669	254317	4338	342	342	...	45	6033	17035	...	255668	
December	3694	112794	40775	36169	25109	3063	38	620	21808	271370	3211	602	602	...	5975	6138	11762	190	278424	
Total:	51128	791631	321909	232848	159744	39466	115	18066	343720	1954627	33751	3851	3851	125	371043	42215	372544	5562	2027826	
% of Total Sales	2.62	40.50	16.46	11.91	8.17	1.81	0.01	0.92	17.60											

* 32092 tons used making briquettes, 661 tons used making char and 998 tons used in oil drilling fluids

How the total Output of SUB-BITUMINOUS COAL was disposed of by months during 1961

Months	Sold for Consumption in:								Used in Oil Drilling Plants	Used under Colliery Boilers	Put to Stock	Put to Waste	Lifted from Stock	Lifted from Waste	Total Output
	Sold to Railway Companies	Alberta	British Columbia	Sask.	Manitoba	Ontario	Quebec	United States							
January	698	86941	19487	33180	23713	1312	40	150	...	162	1417	4404	3216	...	174488
February	5244	19240	16845	16198	18671	291	...	50	...	143	189	2265	4385	...	134609
March	5232	20315	18277	17720	2542	405	37	49	...	113	1793	2268	2862	...	62909
April	5269	20315	8227	3750	2542	405	...	...	...	152	3257	1070	1987	...	52284
May	2669	56759	6375	3264	1032	126	...	...	...	20	4430	719	665	...	34729
June	555	11358	4055	2102	267	158	...	...	...	20	5067	8	589	...	23001
July	843	113839	466	253	191	...	...	...	...	...	...	5	1312	...	14285
August	758	21796	8037	6545	2348	694	...	50	...	20	3238	12	1211	289	41295
September	3997	70669	13871	38491	21691	619	...	...	...	32	1559	3928	3810	...	150947
October	8983	112573	21459	50045	29996	1485	...	...	...	60	4208	8866	7739	...	230039
November	4561	116054	21419	30006	21278	923	...	103	998	80	3342	6505	...	...	196956
December	3527	135223	23546	35994	24787	989	38	49	...	122	1940	6038	2908	...	229345
Total:	50386	745471	150007	227492	146683	7548	115	555	998	824	30844	38868	37902	289	1361600
% of Total Sales:	3.79	56.13	11.29	17.13	11.04	0.57	0.01	0.04							

OUTPUT AND NUMBER OF MINES PRODUCING

Kind of Coal	Under 1,000 Tons		1,000 to 5,000 Tons		5,000 to 10,000 Tons		10,000 to 50,000 Tons		50,000 to 100,000 Tons		100,000 to 150,000 Tons		150,000 to 200,000 Tons		200,000 to 300,000 Tons		Over 300,000 Tons		Total	
	No.	Output	No.	Output	No.	Output	No.	Output	No.	Output	No.	Output	No.	Output	No.	Output	No.	Output	No.	Output
Bituminous.....	2	398	3	7,993	1	5,563	1	10,847	2	148,697	..	...	..	...	2	492,728	..	...	11	666,226
Sub-bituminous.	18	5,691	8	23,928	6	50,860	16	356,510	..	...	1	110,903	3	495,633	1	288,075	..	...	53	1,361,600
Total.....	20	6,089	11	31,921	7	56,423	17	367,357	2	148,697	1	110,903	3	495,633	3	780,803	..	...	64	2,027,826

PER CAPITA PRODUCTION OF MINES BY AREAS
BITUMINOUS COAL FIELD

Areas	Strip and Underground Mining						Strip Mining						Underground Mining					
	Gross tons of coal mined	Total Average No. of Men Employed	Tons of coal mined per man employed	Total No. of Man-shifts	Tons of coal mined per eight hour man-shift		Gross tons of coal mined	Total Average No. of men employed	Tons of coal mined per man employed	Total No. of Man-shifts	Tons of coal mined per eight hour man-shift		Gross tons of coal mined	Total Average No. of men employed	Tons of coal mined per man employed	Total No. of Man-shifts	Tons of coal mined per eight hour man-shift	
Group 1:																		
Cascade.....	230,058	216	1,065	51,991	4.42	...	...	...	...	...	...	...	230,058	216	1,065	51,991	4.42	
Group 2:																		
Crowsnest.....	352,665	290	1,216	67,116	5.25	70,508	40	1,763	9,110	7.74	282,157	250	1,129	58,006	4.86			
Group 3:																		
Coalspur.....	4,916	15	328	3,177	1.55	...	...	...	...	...	...	...	4,916	15	328	3,177	1.55	
Halcourt.....	360	1	360	82	4.39	...	1	360	82	4.39	...	...	...	...	...	...	...	
Lethbridge.....	78,227	129	606	21,459	3.64	...	...	...	...	...	...	...	78,227	129	606	21,459	3.64	
Total.....	666,226	651	1,023	143,825	4.63	70,868	41	1,728	9,192	7.70	595,358	610	976	134,633	4.42			

SUB-BITUMINOUS COAL FIELD

Group 4:											
Ardsley.....	11,320	13	3,178	3,519	11,64	11,320	13	3,178	3,519	11,64	...
Brooks.....	8,660	8	1,082	2,175	3.98	8,660	8	1,082	2,175	3.98	...
Carbon.....	19,518	19	1,027	3,703	5.21	11,689	4	2,922	1,033	11.31	...
Champion.....	5,188	10	519	2,069	2.51	...	...	4,867	798	...	...
Drumeller.....	382,576	336	1,139	60,671	6.50	14,601	3	2,166	1,258	18.29	...
Edmonton.....	69,528	86	1,016	18,389	4.71	15,163	7	...	1,258	12.05	...
Gleichen.....	2,372	7	339	1,222	1.94	...	...	...	...	...	...
Pembina.....	56,133	29	1,936	7,251	7.74	56,133	29	1,936	7,251	7.74	...
Taber.....	45,035	24	1,876	6,193	7.27	45,035	24	1,876	6,193	7.27	...
Wetaskiwin.....	3,190	2	1,595	442	7.22	3,190	2	1,595	442	7.22	...
Whitecourt.....	68	1	68	12	5.67	68	1	68	12	5.67	...
Group 5:											
Camrose.....	28,212	12	2,351	3,453	8.17	28,212	12	2,351	3,453	8.17	...
Castor.....	482,861	81	5,921	20,195	23.91	481,289	76	6,333	19,435	24.76	...
Redcliff.....	2,398	4	599	927	2.59	...	...	...	...	...	...
Sheerness.....	155,967	27	5,777	6,912	22.56	155,967	27	5,777	6,912	22.56	...
Tofield.....	20,163	7	2,880	2,139	9.43	20,163	7	2,880	2,139	9.43	...
Westlock.....	18,011	6	3,002	1,375	13.10	18,011	6	3,002	1,375	13.10	...
Total.....	1,361,600	672	2,026	111,317	9.63	899,501	219	4,107	56,025	16.06	...
									1,020	85,292	5.42

SUMMARY

Bituminous.....	666,226	651	1,023	113,825	4.63	70,868	11	1,728	9,192	7.70	134,633
Sub-Bituminous..	1,361,600	672	2,026	111,317	9.63	899,501	219	4,107	56,025	16.06	85,292
Total.....	2,027,826	1,323	1,533	205,142	7.11	970,369	260	3,732	65,217	14.86	219,925
									9,948	219,925	4.81

THE MINES DIVISION

AMOUNT OF COAL DISPOSED OF DURING THE YEAR BY AREA, ACCORDING TO SIZE GRADING

[illegible]

AMOUNT OF COAL DISPOSED OF DURING THE YEAR BY AREA, ACCORDING TO SIZE GRADING

AREA \ SIZE GRADING	RUN OF MINE	LUMP OR COBBLE	EGG	NUT OR STOVE	PRE-PARED STOKER	NUT SLACK	SLACK	TOTAL BY AREA.
FOR CONSUMPTION IN BRITISH COLUMBIA								
Cascade	...	1570	...	306	14406	...	...	16282
Crownsnest	357	522	...	1043	6465	11463	95165	115015
Coalspur	...	2078	967	...	548	1323	...	4916
Lethbridge	...	13432	8594	1356	11207	847	253	35689
Drumheller	...	29887	19229	5484	22881	...	209	77690
Edmonton	...	181	...	...	...	...	...	181
Pembina	...	958	372	886	7218	...	...	9434
Taber	...	2226	4214	1202	10801	2136	...	20579
Castor	...	16624	4118	3122	12463	3602	...	39929
Sheerness	...	187	125	356	1526	...	...	2194
Total	357	67665	37619	13755	87515	19371	95627	321909
FOR CONSUMPTION IN SASKATCHEWAN								
Cascade	...	30	...	...	757	...	...	787
Crownsnest	...	37	...	...	...	...	...	37
Lethbridge	...	3563	843	...	126	...	...	4532
Drumheller	...	73138	26975	10478	6352	...	10255	127198
Pembina	...	80	551	172	269	...	...	1072
Taber	...	91	...	43	...	...	...	134
Castor	...	21741	4034	14242	13617	641	93	54368
Sheerness	...	5929	1262	17799	16004	...	3430	44424
Tofield	...	105	...	127	64	...	...	296
Total	...	104714	33665	42861	37189	641	13778	232848

THE MINES DIVISION

AMOUNT OF COAL DISPOSED OF DURING THE YEAR BY AREA, ACCORDING TO SIZE GRADING

AREA \ SIZE GRADING	RUN OF MINE	LUMP OR COBBLE	EGG	NUT OR STOVE	PRE-PARED STOKER	NUT SLACK	SLACK	TOTAL BY AREA.
		FOR CONSUMPTION IN MANITOBA						
Cascade	168	82	...	...	2132	...	...	2382
Crowsnest	3342	70	...	76	817	5962	78	10345
Lethbridge	...	290	25	...	19	...	...	334
Drumheller	...	29589	7257	418	1974	...	...	39238
Pembina	...	...	...	...	322	...	...	322
Taber	...	463	1757	163	...	...	...	2383
Castor	206	18812	1779	1004	39357	...	103	61261
Sheerness	...	3680	457	4296	34626	...	301	43360
Tofield	...	10	...	...	109	...	...	119
Total	3716	52996	11275	5957	79356	5962	482	159744
		FOR CONSUMPTION BY RAILWAY COMPANIES						
Cascade	605	...	...	...	41	...	...	646
Crowsnest	...	37	...	...	59	...	...	96
Drumheller	...	206	1876	500	163	...	...	2745
Pembina	...	...	377	...	...	...	...	377
Taber	...	...	...	...	...	8600	...	8600
Castor	...	...	21250	...	887	...	...	22137
Sheerness	...	...	12000	...	4527	...	...	16527
Total	605	243	35503	500	5677	8600	...	51128
		FOR CONSUMPTION IN QUEBEC						
Drumheller	...	...	115	...	...	...	...	115
Total	...	...	115	...	...	...	...	115

AMOUNT OF COAL DISPOSED OF DURING THE YEAR BY AREA, ACCORDING TO SIZE GRADING

AREA \ SIZE GRADING	RUN OF MINE	LUMP OR COBBLE	EGG	NUT OR STOVE	PRE-PARED STOKER	NUT SLACK	SLACK	TOTAL BY AREA.
FOR CONSUMPTION IN ONTARIO								
Cascade	...	1943	...	1797	9986	7382	...	21108
Crowsnest	...	...	...	2310	...	...	...	2310
Lethbridge	...	2654	1846	...	...	...	...	4500
Drumheller	...	4654	1605	111	140	...	...	6510
Edmonton	...	736	...	12	...	...	...	748
Taber	...	73	9	...	...	...	...	82
Castor	...	41	...	...	...	...	...	41
Sheerness	...	45	81	...	...	...	...	126
Tofield	...	41	...	...	...	...	...	41
Total	...	10187	3541	4230	10126	7382	...	35466
FOR CONSUMPTION IN UNITED STATES								
Cascade	4675	...	...	...	3010	558	...	8243
Crowsnest	80	...	...	119	8868	...	...	9067
Lethbridge	...	...	...	...	...	201	...	201
Castor	...	...	...	...	555	...	...	555
Total	4755	...	...	119	12433	759	...	18066
FOR CONSUMPTION IN JAPAN								
Cascade	...	...	...	...	...	...	157081	157081
Crowsnest	...	...	...	...	...	186639	...	186639
Total	...	...	...	...	...	186639	157081	343720

THE MINES DIVISION

PRODUCTION OF COAL PER EIGHT-HOUR MAN-SHIFT
For the Years 1942 to 1961 Inclusive

Year	Gross tons of coal mined	Total No. of Eight-hour Man-shifts	Average No. of tons of coal mined Per Eight-hour Shift
1942.....	7,754,279	2,229,655	3.477
1943.....	7,677,982	2,200,426	3.489
1944.....	7,427,433	2,034,155	3.651
1945.....	7,801,248	1,990,452	3.919
1946.....	8,824,455	2,105,511	4.191
1947.....	8,074,596	1,998,002	4.041
1948.....	8,111,013	1,894,837	4.280
1949.....	8,616,983	1,910,922	4.510
1950.....	8,118,206	1,735,316	4.678
1951.....	7,661,276	1,663,061	4.552
1952.....	7,194,472	1,522,264	4.726
1953.....	5,917,423	1,141,531	5.184
1954.....	4,859,136	943,558	5.150
1955.....	4,456,578	783,239	5.690
1956.....	4,329,639	750,318	5.770
1957.....	3,155,354	535,346	5.894
1958.....	2,519,939	386,636	6.517
1959.....	2,549,517	377,870	6.747
1960.....	2,404,093	366,970	6.551
1961.....	2,027,826	285,142	7.112

AMOUNT OF MINE TIMBER USED DURING THE YEAR

BITUMINOUS COAL FIELD

Area	Timber lineal feet	Lumber B.M. feet	Lagging lineal feet	Ties lineal feet	Sprags lineal feet
Group 1: Cascade.....	333,400	...	465,922	17,816	...
Group 2: Crowsnest.....	425,055	314,259	189,070	1,901	320
Group 3: Coalspur.....	14,800	4,000	6,400	500	...
Lethbridge.....	56,630	8,219	...	4,387	...
Total.....	829,885	326,478	661,392	24,604	320

SUB-BITUMINOUS COAL FIELD

Group 4: Carbon.....	61,900	4,770	5,600	7,650	...
Champion.....	7,076	4,600	1,200	...	...
Drumheller.....	812,204	4,292	...	68,850	...
Edmonton.....	162,860	10,688	5,100	14,156	...
Gleichen.....	6,500	...	200	400	...
Group 5: Castor.....	11,396	...	600	395	...
Redcliff.....	10,081	...	1,082	...	...
Tofield.....	1,200	...	...	...	...
Total.....	1,073,217	24,350	13,782	91,451	...

PARTICULARS OF LAMPS IN THE BITUMINOUS AND SUB-BITUMINOUS COAL FIELDS DURING THE YEARS 1960 and 1961.

BITUMINOUS COAL FIELD

	<u>1960</u>	<u>1961</u>
Portable Electric Lamps, Edison Cap Type.....	1,049	672
Wolfe Flame Type.....	79	67
Total.....	1,128	739

SUB-BITUMINOUS COAL FIELD

Portable Electric Lamps, Edison Cap Type.....	799	779
Wolfe Flame Type.....	77	77
Total.....	876	856

THE MINES DIVISION

QUANTITY OF EXPLOSIVES USED IN POUNDS FOR BLASTING COAL

BITUMINOUS COAL FIELD

Area	Name of Explosives							Total
	Pellet	Monobel	BL-100	CXL-ite	Airdox	Cardox	Forcite	
Group 1:								
Cascade.....	...	56,650	...	...	...	...	...	56,650
Group 2:								
Crownsnest.....	...	7,867	545	...	...	...	490	8,902
Group 3:								
Coalspur.....	...	1,000	...	...	...	...	...	1,000
Halcourt.....	125	...	...	...	...	...	...	125
Lethbridge....	50	6,018	...	...	7,639	...	...	13,707
Total.....	175	71,535	545	...	7,639	...	490	80,384

SUB-BITUMINOUS COAL FIELD

Group 4:								
Ardley.....	...	7,350	...	...	...	...	...	7,350
Brooks.....	2,184	...	225	...	...	...	...	2,409
Carbon.....	2,690	1,865	50	...	...	...	...	4,605
Champion.....	1,150	100	...	...	...	...	...	1,250
Drumheller...	1,908	3,750	...	...	31,441	...	...	37,099
Edmonton.....	...	13,049	...	...	...	...	...	13,049
Gleichen.....	200	150	...	...	...	...	...	350
Pembina.....	...	5,061	...	...	...	...	...	5,061
Wetaskiwin...	...	1,200	...	...	...	...	...	1,200
Whitecourt...	...	40	...	...	...	...	...	40
Group 5:								
Camrose.....	...	630	...	...	...	...	...	630
Castor.....	335	6,515	...	...	...	...	...	6,850
Redcliff.....	530	...	...	...	...	...	...	530
Sheerness.....	...	...	...	...	...	...	300	300
Tofield.....	...	1,300	...	...	...	...	650	1,950
Westlock.....	...	125	...	...	...	...	...	125
Total.....	8,997	41,135	275	...	31,441	...	950	82,798

ESTIMATED NUMBER OF SHOTS FIRED FOR BLASTING COAL

BITUMINOUS COAL FIELD

Area	Electric Detonators	Electric Squibs	Cardox Heaters	Total
Group 1:				
Cascade.....	59,981	...	...	59,981
Group 2:				
Crowsnest.....	7,747	...	...	7,747
Group 3:				
Coalspur.....	1,000	...	...	1,000
Halcourt.....	...	250	...	250
Lethbridge.....	9,343	50	...	9,393
Total.....	78,071	300	...	78,371

SUB-BITUMINOUS COAL FIELD

Group 4:				
Ardley.....	8,067	...	...	8,067
Brooks.....	...	1,576	...	1,576
Carbon.....	2,067	4,100	...	6,167
Champion.....	100	900	...	1,000
Drumheller.....	6,728	2,632	31,441	40,801
Edmonton.....	16,169	...	...	16,169
Gleichen.....	300	400	...	700
Pembina.....	5,809	...	...	5,809
Wetaskiwin.....	3,180	...	...	3,180
Whitecourt.....	60	...	...	60
Group 5:				
Camrose.....	810	...	...	810
Castor.....	8,300	264	...	8,564
Redcliff.....	...	478	...	478
Sheerness.....	360	...	...	360
Tofield.....	856	...	...	856
Westlock.....	166	...	...	166
Total.....	52,972	10,350	31,441	94,763

NUMBER OF MISSED FIRE SHOTS RECORDED IN BLASTING COAL

Ardley.....	...	4	...	4
Castor.....	1	...	...	1
Drumheller.....	...	1	...	1
Halcourt.....	...	7	...	7
Total.....	1	12	...	13

THE MINES DIVISION

NUMBER OF TONS OF COAL PRODUCED PER POUND OF
EXPLOSIVES USED

BITUMINOUS COAL FIELD

Area	Number of tons of coal mined	Number of pounds of Explosives used	Tons of coal mined per pound of explosives used
Group 1:			
Cascade.....	230,058	56,650	4.06
Group 2:			
Crowsnest.....	352,665	8,902	39.62
Group 3:			
Coalspur.....	4,916	1,000	4.92
Halcourt.....	360	125	2.88
Lethbridge.....	78,227	13,707	5.71
Total.....	666,226	80,384	8.29

SUB-BITUMINOUS COAL FIELD

Group 4:			
Ardley.....	41,320	7,350	5.62
Brooks.....	8,660	2,409	3.59
Carbon.....	19,518	4,605	4.24
Champion.....	5,188	1,250	4.16
Drumheller.....	382,576	37,099	10.31
Edmonton.....	89,928	13,049	6.89
Gleichen.....	2,372	350	6.78
Pembina.....	56,133	5,061	11.09
Taber.....	45,035	...	...
Wetaskiwin.....	3,190	1,200	2.66
Whitecourt.....	68	...	...
Group 5:			
Camrose.....	28,212	630	44.78
Castor.....	482,861	6,850	70.49
Redcliff.....	2,398	530	4.52
Sheerness.....	155,967	300	519.89
Tofield.....	20,163	1,950	10.34
Westlock.....	18,011	125	144.08
Total.....	1,361,600	82,758	16.45

QUANTITY OF EXPLOSIVES USED IN POUNDS FOR BLASTING ROCK
IN COAL MINES

BITUMINOUS COAL FIELD

Area	Pellet	Monobel	BL-100	CXL-ite	Airdox	Cardox	Forcite	Total
Group 1:								
Cascade.....	...	...	...	2,850	...	...	...	2,850
Group 2:								
Crowsnest....	...	...	...	10	...	...	...	10
Total.....	...	...	...	2,860	...	...	...	2,860

SUB-BITUMINOUS COAL FIELD

Group 4:								
Brooks.....	...	...	...	...	...	...	1,366	1,366
Carbon.....	...	250	...	...	...	...	100	350
Drunheller...	...	125	...	...	...	...	...	125
Edmonton....	...	...	...	308	...	...	...	308
Gleichen....	400	...	...	...	...	...	...	400
Whitcourt...	...	40	...	...	...	...	...	40
Group 5:								
Redcliff.....	...	...	21	10	...	...	...	31
Total.....	400	415	21	318	...	...	1,466	2,620

THE MINES DIVISION

ESTIMATED NUMBER OF SHOTS FIRED FOR BLASTING ROCK
IN COAL MINES

BITUMINOUS COAL FIELD

Area	Electric Detonators	Electric Squibs	Total
Group 1: Cascade.....	3,018	...	3,018
Group 2: Crowsnest.....	30	...	30
Total.....	3,048	...	3,048

SUB-BITUMINOUS COAL FIELD

Group 4:			
Brooks.....	27	...	27
Carbon.....	510	...	510
Drumheller.....	198	...	198
Edmonton.....	278	...	278
Gleichen.....	...	600	600
Whitecourt.....	60	...	60
Group 5:			
Redcliff.....	26	...	26
Total.....	1,099	600	1,699

ELECTRICITY

Area	Number of Mines using Electricity	Horsepower of Electrical Equipment in Use		Total Horsepower	Purchased Power
		Above Ground	Below Ground		
Ardley.....	2	60	...	60	2,830
Brooks.....	1	30	...	30	32,610
Camrose.....	1	90	...	90	67,600
Carbon.....	4	36	138	174	62,335
Cascade.....	1	5,374	275	5,649	8,679,200
Castor.....	5	1,764	35	1,799	1,937,655
Champion.....	1	10	5	15	5,966
Coalspur.....	1	40	...	40	...
Crowsnest.....	6	11,842	1,565	13,407	5,249,755
Drumheller.....	6	3,700	4,204	7,904	3,051,755
Edmonton.....	5	462	1,106	1,568	419,350
Gleichen.....	2	8	70	78	22,000
Lethbridge.....	1	1,092	965	2,057	1,236,600
Pembina.....	2	118	...	118	102,720
Redcliff.....	1	92	101	193	24,240
Sheerness.....	1	1,446	...	1,446	714,600
Taber.....	1	678	...	678	44,160
Tofield.....	2	154	...	154	33,220
Westlock.....	1	10	...	10	8,000
Wetaskiwin.....	1	10	...	10	...
Total.....	45	27,016	8,464	35,480	21,694,596

COAL-CUTTING MACHINERY

Area	No. of Machines Operated by:			Tons of Coal Mined by:	
	Electricity	Compressed Air		Electricity	Compressed Air
		Picks	Machines		
Carbon.....	4	...	...	7,649	...
Cascade.....	1	60	...	34,092	146,973
Castor.....	2	...	1	264	419
Champion.....	...	...	2	...	4,635
Coalspur.....	...	...	2	...	4,916
Crowsnest.....	...	42	...	...	15,529
Drumheller.....	33	...	...	363,402	...
Edmonton.....	12	...	...	74,529	...
Gleichen.....	3	...	...	2,392	...
Lethbridge.....	9	...	...	78,167	...
Redcliff.....	2	...	...	2,397	...
Total.....	66	102	5	562,892	172,472

FATAL ACCIDENTS

Wolfgang Frederick Holtemeyer, 20, Euclid truck driver, on October 25th, at the strip mine operated by Great West Coal Co. Ltd., Sheerness. While attempting to enter the cab of the Euclid from the top of the loaded trailer while in motion, the truck jack-knifed, crushing the driver's skull between the cab and box of trailer, causing fatal injuries.

In addition to the above, the following death occurred which was not classified as a mine fatality.

James Peko, 61, tipple employee, on December 18th, at the mine operated by Federated Co-operatives Ltd., Drumheller. While employed on the tipple, he collapsed and died from natural causes.

Accidents during 1961, classified according to the Mines
in which they occurred

Name of Operator	Area	Above Ground			Below Ground			Total Above and Below Ground
		Fatal	Slight	Total	Fatal	Slight	Total	
Bituminous	Blackstone Collieries Limited (1692).....	..	1	1	..	1	1	2
	The Cammure Mines Limited (2).....	..	1	1	..	3	3	7
	Coleman Collieries Ltd. (1747).....	..	1	1	..	3	3	4
	Lethbridge Collieries Limited (1263).....	..	1	1	..	1	1	3
Sub-Bituminous	Drumheller.....	..	..	..	..	..	1	1
	Sheerness.....	1	1	2	..	..	..	2
	Drumheller.....	..	..	..	..	1	1	1
	Drumheller.....	..	..	..	..	1	1	1
	Red Deer Valley Coal Co. Ltd. (402).....	..	..	..	..	..	..	..
		..	..	..	..	..	..	..
Total.....		1	3	6	..	9	15	21

THE MINES DIVISION

ACCIDENTS AS THEY OCCURRED BY MONTHS DURING THE YEAR 1961

Months	Above Ground				Below Ground				Total Above and Below Ground
	Fatal	Serious	Slight	Total	Fatal	Serious	Slight	Total	
January.....	..	..	1	1	..	..	3	3	4
February.....	..	..	..	..	..	..	..	..	..
March.....	..	..	..	..	..	1	2	3	3
April.....	..	..	1	1	..	1	1	2	3
May.....	..	1	..	1	..	..	..	..	1
June.....	..	1	..	1	..	..	..	..	1
July.....	..	..	..	..	..	..	1	1	1
August.....	..	..	..	..	..	..	..	..	..
September.....	..	..	..	..	..	1	..	1	1
October.....	1	..	..	1	..	..	..	..	1
November.....	..	..	..	..	..	1	1	2	2
December.....	..	1	..	1	..	2	1	3	4
Total.....	1	3	2	6	..	6	9	15	21

ACCIDENTS OCCURRING IN THE PROVINCE ABOVE AND BELOW GROUND
DURING THE YEAR 1961

Causes	Above Ground				Below Ground				Total Above and Below Ground
	Fatal	Serious	Slight	Total	Fatal	Serious	Slight	Total	
Bucking Coal.....	..	..	..	..	..	..	1	1	1
Box Car Handling.....	..	1	..	1	..	..	..	..	1
Fail of Coal.....	..	..	..	..	..	..	3	3	3
Fail of Rock at Face.....	..	..	..	..	..	1	1	2	2
Haulage.....	..	..	1	1	..	5	2	7	8
Machinery.....	..	1	..	1	..	..	..	..	1
Miscellaneous.....	..	1	1	2	..	..	2	2	4
Truck Driving.....	1	..	..	1	..	..	..	..	1
Total.....	1	3	2	6	..	6	9	15	21

ACCIDENTS OCCURRING IN THE PROVINCE ABOVE AND BELOW GROUND FOR THE
YEAR 1961, CLASSIFIED ACCORDING TO THE AREA IN WHICH THEY OCCURRED

BITUMINOUS

Area	Above Ground				Below Ground				Total Above and Below Ground
	Fatal	Serious	Slight	Total	Fatal	Serious	Slight	Total	
Cascade.....	..	1	..	1	..	3	3	6	7
Crowsnest.....	..	..	1	1	..	..	3	3	4
Coalspur.....	..	1	..	1	..	..	1	1	2
Lethbridge.....	..	1	..	1	..	1	1	2	3
Total.....	..	3	1	4	..	4	8	12	16

SUB-BITUMINOUS

Drumheller.....	..	..	..	..	..	2	1	3	3
Sheerness.....	1	..	1	2	..	..	..	..	2
Total.....	1	..	1	2	..	2	1	3	5

THE MINES DIVISION

NUMBER OF TONS PRODUCED PER ACCIDENT

BITUMINOUS COAL FIELD

Area	Output	No. of Tons Produced Per Accident			
		Fatal	Serious	Slight	Total
Group 1:					
Cascade.....	230,058	...	57,514	76,686	32,865
Group 2:					
Crowsnest.....	352,665	...	...	88,166	88,166
Group 3:					
Coalspur.....	4,916	...	4,916	4,916	2,458
Halcourt.....	360	...	...	...	...
Lethbridge.....	78,227	...	39,113	78,227	26,076
Total.....	666,226	...	95,175	74,025	41,639

SUB-BITUMINOUS COAL FIELD

Group 4:					
Ardley.....	41,320	...	...	...	...
Brooks.....	8,660	...	...	...	...
Carbon.....	19,518	...	...	...	...
Champion.....	5,188	...	...	...	...
Drumeller.....	382,576	...	191,288	382,576	127,525
Edmonton.....	89,928	...	...	...	...
Gleichen.....	2,372	...	...	...	...
Pembina.....	56,133	...	...	...	...
Taber.....	45,035	...	...	...	...
Wetaskiwin.....	3,190	...	...	...	...
Whitcourt.....	68	...	...	...	...
Group 5:					
Camrose.....	28,212	...	...	...	...
Castor.....	482,861	...	...	...	...
Redcliff.....	2,398	...	...	...	...
Sheerness.....	155,967	155,967	...	155,967	77,983
Tofield.....	20,163	...	...	...	...
Westlock.....	18,011	...	...	...	...
Total.....	1,361,600	1,361,600	680,800	680,800	272,320

SUMMARY

Bituminous.....	666,226	...	95,175	74,025	41,639
Sub-Bituminous.....	1,361,600	1,361,600	680,800	680,800	272,320
Total.....	2,027,826	2,027,826	225,314	184,348	96,563

CLASSIFICATION OF ACCIDENTS ACCORDING TO OUTPUT OF MINES WHICH PRODUCED DURING THE YEAR 1961

Accidents	Under 1,000 tons	1,000 to 5,000 tons	5,000 to 10,000 tons	10,000 to 50,000 tons	50,000 to 100,000 tons	100,000 to 150,000 tons	150,000 to 200,000 tons	200,000 to 300,000 tons	Over 300,000 tons	Total
Fatal.....	...	...	...	...	...	...	1	...	...	1
Serious.....	...	1	...	1	2	...	1	4	...	9
Slight.....	...	1	...	1	1	...	1	7	...	11
Total.....	...	2	...	2	3	...	3	11	...	21

TONS OF COAL PRODUCED PER ACCIDENT										
Fatal.....	...	...	...	...	...	...	495,633	...	...	2,027,826
Serious.....	...	31,921	...	367,357	74,349	...	495,633	195,201	...	225,214
Slight.....	...	31,921	...	367,357	148,697	...	495,633	111,543	...	184,348
Total.....	...	15,961	...	183,678	49,566	...	165,211	70,982	...	96,563

THE MINES DIVISION

ACCIDENTS

Summary Table showing Accidents occurring in the Mines from 1942 to 1961 inclusive, reportable under The Coal Mines Regulation Act.

Year	Output	Accidents			Tons of Coal Mined Per Accident		
		Fatal	Serious	Slight	Fatal	Serious	Slight
1942.....	7,754,279	17	92	148	456,134	84,285	52,393
1943.....	7,677,982	25	73	152	307,119	105,178	50,513
1944.....	7,427,433	10	70	125	742,743	106,106	59,419
1945.....	7,801,248	23	51	168	339,185	154,925	46,436
1946.....	8,824,455	12	76	128	735,371	116,111	68,941
1947.....	8,074,596	15	121	117	536,306	66,732	69,014
1948.....	8,111,013	13	91	93	623,924	89,132	87,215
1949.....	8,616,983	13	89	108	662,076	96,708	79,694
1950.....	8,118,206	20	86	97	405,910	94,398	83,693
1951.....	7,661,276	9	85	53	851,253	90,133	144,552
1952.....	7,194,472	7	79	79	1,027,782	91,069	91,069
1953.....	5,917,423	10	59	60	591,742	100,295	98,623
1954.....	4,859,136	8	51	41	607,392	95,277	118,516
1955.....	4,456,578	3	54	52	1,485,526	82,529	85,703
1956.....	4,329,639	6	34	33	721,607	127,342	131,201
1957.....	3,155,354	2	25	15	1,577,677	126,214	210,357
1958.....	2,519,939	6	19	8	419,990	132,628	314,992
1959.....	2,549,517	1	18	10	2,549,517	141,639	254,952
1960.....	2,404,093	2	16	21	1,202,047	150,256	114,481
1961.....	2,027,826	1	9	11	2,027,826	225,314	184,348

COMPARISON OF PROTECTIVE CLOTHING USED FOR THE YEARS
1959, 1960 and 1961.

Clothing	1959	1960	1961
Hard Hats.....	1,710	1,575	1,311
Safety Shoes, pair.....	1,350	1,142	900
Goggles, pairs.....	248	214	222
Knee Pads, pairs.....	74	80	74

Comparison of Accidents per 1,000,000 tons and per 1,000 men employed, 1942 - 1961.

Year	Tonnage	Total No. of men employed	Fatal Accidents			Serious Accidents			Slight Accidents			Total		
			No.	Per 1,000,000 tons	Per 1,000 men employed	No.	Per 1,000,000 tons	Per 1,000 men employed	No.	Per 1,000,000 tons	Per 1,000 men employed	No.	Per 1,000,000 tons	Per 1,000 men employed
1942.....	7,754,279	8,040	17	2.19	2.11	92	11.86	11.44	118	19.09	18.40	257	33.14	31.95
1943.....	7,677,982	8,636	25	3.26	2.89	73	9.51	8.15	152	19.60	17.60	250	32.56	28.95
1944.....	7,427,433	8,375	10	1.34	1.19	70	9.42	8.35	125	16.83	14.92	205	27.60	24.47
1945.....	7,801,218	8,309	23	2.93	2.76	51	6.53	6.13	163	21.53	20.24	242	31.02	29.12
1946.....	8,824,455	8,593	12	1.36	1.39	76	8.61	8.65	126	14.50	14.91	216	24.47	25.16
1947.....	8,074,596	8,772	15	1.86	1.71	121	11.92	13.79	117	11.49	13.33	253	31.33	28.84
1948.....	8,111,013	8,865	13	1.60	1.47	91	11.22	10.27	93	11.47	10.49	197	24.29	22.42
1949.....	8,616,933	8,662	13	1.51	1.50	89	10.33	10.25	108	12.53	12.44	210	24.37	24.19
1950.....	8,118,206	7,999	20	2.46	2.50	86	10.59	10.75	97	11.95	12.13	203	25.01	25.33
1951.....	7,661,276	7,339	9	1.17	1.23	85	11.09	11.58	53	6.92	7.22	147	19.19	20.03
1952.....	7,194,472	6,936	7	0.97	1.01	79	10.98	11.59	79	10.98	11.39	165	22.93	23.79
1953.....	5,917,423	5,760	10	1.69	1.74	59	9.97	10.24	60	10.14	10.12	129	21.90	22.40
1954.....	4,059,136	4,719	8	1.65	1.70	51	10.49	10.31	41	8.43	6.69	100	20.50	21.19
1955.....	4,456,578	3,801	3	0.67	0.79	54	12.12	14.21	52	11.67	13.68	109	24.46	23.68
1956.....	4,329,639	3,413	6	1.39	1.74	34	7.85	9.88	33	7.62	9.58	73	16.56	21.20
1957.....	3,155,354	2,795	2	0.63	0.72	25	7.92	8.94	15	4.75	5.37	42	13.31	15.03
1958.....	2,519,939	2,021	6	2.38	2.97	19	7.54	9.40	8	3.17	3.66	33	13.10	16.33
1959.....	2,549,517	1,720	1	0.39	0.58	18	7.07	10.46	10	3.92	5.82	29	11.37	16.66
1960.....	2,104,093	1,729	2	0.93	1.16	16	6.66	9.25	21	8.74	12.14	39	16.22	22.55
1961.....	2,027,826	1,323	1	0.49	0.76	9	4.44	6.80	11	5.42	8.31	21	10.36	15.87

LIST OF PROSECUTIONS INSTITUTED UNDER THE COAL MINES REGULATION ACT, FOR THE YEAR ENDING DECEMBER 31, 1961.

Mine in which Contravention was Committed	Description of Defendant	Offence Charged	Result of Proceedings	Penalty	Costs
Whitemud Creek Coal Co. Ltd.....	Watchman	Did enter a place in the mine where he was not required by duty to be.....	Convicted....	Fined \$25.00....	\$1.25
Whitemud Creek Coal Co. Ltd.....	Watchman	Did start an auxiliary ventilating device providing ventilation for an advancing place in a mine without the consent of the examiner of the district.	Convicted....	Fined \$25.00....	
.....	Underground locomotive operator...	Did illegally mine coal.....	Convicted....	Fined \$20.00	\$2.50
North Point Coal Co. Ltd.....	Manager....	Did fail to send in monthly statement of production.....	Convicted....	Fined \$25.00	\$1.00

BOARD OF EXAMINERS

The Board of Examiners during the year 1961 consisted of the following:

As representing:

The Mine Inspectorate: J.A. Dutton, Director of Mines.
 Managers: H. Crawford and P.M. Ramsay.
 Working Miners: H.R. Sherwood and G.B. Hunter.
 Secretary: M.B. Rasmussen

Examinations for the following classes of certificates were held in Edmonton and Calgary on June 6th, 7th and 8th, 1961.

One candidate presented himself for examination for First Class (Underground) Certificate and he was unsuccessful.

Five candidates presented themselves for examination for Third Class (Underground) Certificates and two were successful.

One candidate presented himself for examination for Mine Surveyor's Certificate and he was unsuccessful.

Three candidates presented themselves for examination for First Class Mine Electrician's Certificates and all were successful.

Two candidates presented themselves for examination for Manager's (Strip Mine) Certificates and both were successful.

Seven candidates presented themselves for examination for Foremen's (Strip Mine) Certificates and three were successful.

The following list gives the names of successful candidates.

UNDERGROUND MINES

THIRD CLASS

Name	Address	Cert. No.	Date of Certificate
Menzies, Alan R.	Western Monarch	17	26- 7-61
** Olito, Frank	Carmacks, Y.T.		

FIRST CLASS MINE ELECTRICIAN

Labuda, Joseph K.	Wabamun	9	30- 6-61
Marwood, Frank	Calgary	10	4- 7-61
Wakaruk, George	Newcastle	11	10- 7-61

STRIP MINES

MANAGER

Summersgill, MacDonald	Edmonton	7	12- 7-61
McBride, Roy F.	Halkirk	8	26-10-61

THE MINES DIVISION

FOREMAN

Korsa, George	Taber	21	5- 9-61
** Fergusson, Ernest	Halkirk		
** McKnight, Robert J.	Halkirk		

** Certificate not issued as at December 31st, 1961.

In addition to the foregoing, the following certificates were issued to candidates successful in the examinations held in June, 1960.

STRIP MINES

FOREMAN

Feldman, Frank J.	Warburg	19	20- 1-61
Cordel, Emile G.	Halkirk	20	25- 1-61

BLASTER

Strader, James B.	Halkirk	5	31- 7-61
Lickoch, Stephen J.	Camrose	6	21- 9-61

Also in addition to the foregoing the following certificate was issued to a successful candidate in the examinations held in June, 1959.

THIRD CLASS

Papp, Vincent	Cambria	16	6- 7-61
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EXAMINATIONS UNDER THE QUARRIES REGULATION ACT

Written examinations for certificates under the above Act were held in Calgary on June 6th and in Edmonton on June 6th and September 6th, 1961.

One candidate presented himself for examination for Manager's Certificate and was unsuccessful.

Six candidates presented themselves for examination for Foremen's Certificates and five were successful.

The following list gives the names of successful candidates:

QUARRIES

FOREMAN

Name	Address	Cert. No.	Date of Certificate
Gray, Hugh D.	Edmonton	29	15- 6-61
Brown, Harold R.	Exshaw	30	15- 6-61
Atkinson, Norman R.	Forest Lawn	31	15- 6-61
Eristow, Jack W.	Edmonton	32	15- 6-61
Studer, Thomas A.	Onoway	34	7- 9-61

The following list gives the names of successful candidates, by oral examination, for Quarry Blasters' Certificates.

BLASTER

Pfannmuller, George	Cadomin	56	8- 2-61
Marcetta, Nicholas	Cadomin	57	10- 2-61
Patterson, Robert H.	Cochrane	58	19- 5-61
Parkin, John W.	Bowness	59	4- 8-61
Miserva, Andrew A.	Beverly	60	13- 9-61

REPORT OF ANALYSIS OF COMMERCIAL COAL SAMPLES

Samples taken during 1961 and published in accordance
with Regulation 17 (5) of The Coal Sales Regulations
established pursuant to The Coal Sales Act.

Mine	Size	Moisture	Ash	Volatile Matter	Carbon	Sulphur	BTU/lb
Alberta Coal Sales Ltd.	Lump	14.0	10.3	31.8	43.9	0.9	10,120
	Egg	14.1	9.4	32.2	44.3	0.9	10,150
	Nut	14.4	10.0	32.3	43.3	0.8	10,080
	Stoker	14.2	10.1	32.6	43.1	1.1	10,060
	Slack	14.4	12.9	31.5	41.2	1.3	9,580
Amalgamated Coals Ltd.	Lump	19.2	7.2	31.4	42.2	0.5	9,500
	Egg	19.6	8.5	31.0	40.9	0.5	9,350
	Nut	19.3	10.3	30.5	39.9	0.5	9,050
	Stoker	18.9	10.9	30.0	40.2	0.5	9,050
	Slack	19.4	9.8	29.8	41.0	0.5	9,070
Battle River Coal Co. Ltd.	Lump	22.9	6.0	30.3	40.8	0.5	9,170
	Egg	23.2	6.2	29.8	40.8	0.5	9,170
	Nut	23.8	6.5	29.4	40.3	0.5	8,930
	Stoker	24.8	7.2	28.4	39.6	0.6	8,660
	Slack	25.2	7.8	28.5	38.5	0.5	8,510
Camrose Collieries Ltd.	Lump	23.6	4.0	34.1	38.3	0.3	9,280
	Egg	23.6	5.8	31.3	39.3	0.3	9,020
	Nut	23.8	6.5	30.1	39.6	0.3	8,880
	Stoker	22.9	7.6	29.6	39.9	0.4	8,780
	Slack	24.1	14.2	26.9	34.8	0.5	7,750
Century Coals Ltd.	Lump	18.8	6.5	31.3	43.4	0.7	9,690
	Egg	18.9	9.7	29.6	41.8	0.6	9,190
	Nut	18.1	10.9	31.0	40.0	0.8	9,160
	Stoker	17.9	11.2	30.2	40.7	0.6	9,120
	Slack	18.5	10.7	30.5	40.3	0.6	9,100
Egg Lake Coal Co. Ltd.	Lump	26.4	6.0	29.1	38.5	0.2	8,600
	Stove	26.2	6.2	30.4	37.2	0.2	8,470
	Nut	25.6	7.3	30.9	36.2	0.2	8,530
	Stoker	26.3	8.1	29.1	36.5	0.3	8,270
	Slack	26.1	10.3	28.3	35.3	0.3	7,930
Federated Co-Ops Ltd.	Lump	19.1	5.0	31.3	44.6	0.4	9,940
	Egg	18.9	5.7	31.6	43.8	0.4	9,870
	Nut	18.7	10.2	29.5	41.6	0.4	9,310
	Stoker	19.4	10.8	28.6	41.2	0.4	9,070
	Slack	18.6	11.6	29.9	39.9	0.5	9,040

Mine	Size	Moisture	Ash	Volatile Matter	Carbon	Sulphur	BTU/lb
Forestburg Collieries Ltd.	Lump	25.0	5.5	28.6	40.9	0.5	9,000
	Stove	25.4	5.4	29.3	39.9	0.5	8,860
	Nut	25.6	6.6	29.8	38.0	0.6	8,700
	Stoker	24.4	6.3	31.5	37.8	0.5	9,020
	Slack	23.6	8.0	29.0	39.4	0.5	8,700
Great West Coal Co. Ltd.	Lump	27.2	5.5	30.0	37.3	0.4	8,380
	Egg	27.6	5.6	29.2	37.6	0.4	8,310
	Nut	26.6	5.7	29.5	38.2	0.4	8,420
	Stoker	27.5	5.7	29.9	36.9	0.4	8,310
	Slack	27.2	6.9	29.2	36.6	0.4	8,180
Kleenbirn Collieries Ltd.	Lump	17.6	9.3	31.7	41.4	0.6	9,680
	Egg	17.3	9.6	31.8	41.3	0.6	9,650
	Nut	17.5	11.4	30.7	40.4	0.5	9,360
	Stoker	17.4	12.3	31.0	39.3	0.6	9,170
	Slack	17.1	14.2	30.3	38.4	0.7	8,950
Lethbridge Collieries Ltd.	Lump	11.3	10.9	33.3	44.5	0.5	10,540
	Stove	11.6	10.5	33.5	44.4	0.6	10,560
	Stoker	10.8	14.1	32.3	42.8	0.6	10,130
	Slack	10.4	15.4	31.7	42.5	0.6	9,960
Red Deer Valley Coal Co. Ltd.	Lump	17.5	6.0	31.8	44.7	0.3	10,120
	Egg	17.5	5.5	33.0	44.0	0.3	10,180
	Nut	17.2	12.3	30.5	40.0	0.3	9,330
	Stoker	17.3	9.2	32.1	41.3	0.3	9,580
	Slack	17.2	13.0	29.2	40.6	0.3	9,080
Star-Key Mines Ltd.	Lump	23.3	7.6	28.8	40.3	0.3	8,940
	Stove	23.9	7.5	28.9	39.7	0.2	8,640
	Nut	25.3	7.5	28.3	38.9	0.2	8,470
	Stoker	24.2	9.5	28.0	38.3	0.2	8,390
	Slack	23.6	16.7	25.0	34.7	0.4	7,730
Whitemud Creek Coal Co. Ltd.	Lump	23.6	6.5	28.6	41.3	0.2	9,010
	Stove 2	22.0	8.5	30.0	39.5	0.2	8,910
	Stove 3	23.0	6.8	30.2	40.0	0.2	9,060
	Nut	22.4	7.8	29.3	40.5	0.2	9,050
	Stoker	22.9	8.7	28.5	39.9	0.2	8,780
	Slack	22.7	9.1	29.0	39.2	0.2	8,750

LIST OF MINES OPERATING DURING

The Year 1961

Character of Coal:—Bituminous

MINE NO.	OPERATOR	MINE OFFICE ADDRESS	MINE LOCATION L. S. S. T. R. M.	REGISTERED TRADE NAME	DATE OF OPENING
2	Cascade Area The Cammore Mines Limited..... Coalspur Area	Cammore.....	Parts 24-10-5	Cammore Smokeless Coal, Cammore Briquettes.....	1891
1692	Blackstone Collieries..... Crownest Area	Coalspur.....	7-33-48-21-5	King Coal.....	1960
87 1153 1584 1695 1731 1747	West Canadian Collieries Ltd.. C & F Mining Co..... Senyoz Collieries..... Coleman Collieries Ltd..... Castle Coal Co..... Coleman Collieries Ltd.....	Bellevue..... Bellevue..... Bellevue..... Coleman..... Blairmore..... Coleman.....	9-10-20 -7 -3-5 1-2-12 -7 -3-5 4-31 -6 -3-5 12 -7 -6-5 8 -9 -6 -2-5 16-19 -9 -4-5	Bellevue Coal..... Surefire..... Bonfire..... Coleman Coal..... Standard..... Vicary Creek Coal.....	1903 1961 * 1961 * 1949 1960 1957
1598	Halcourt Area Hillside Coal Company..... Lethbridge Area	Halcourt.....	3-25-70-11-6	Hillside Coal.....	1942
1086 1263	Steve's Mine..... Lethbridge Collieries Ltd.....	Magrath..... Shaughnessy.....	8-9 -7 -7-21-4 11-30-10-21-4	Steve's Mine Coal..... Cadillac Coal, Galt Coal, Imperial Coal.....	1923 1927
	* Re-opened				

LIST OF MINES OPERATING DURING

The Year 1961

Character of Coal:--Sub-bituminous

MINE NO.	OPERATOR	MINE OFFICE ADDRESS	MINE LOCATION L. S. S. T. R. M.	REGISTERED TRADE NAME	DATE OF OPENING
255 809 1734	Ardley Area Conger Mine..... Allyn Mann Construction..... John Lynass.....	Alix..... Alix..... Dalburne.....	W. $\frac{3}{4}$ of 1142-17-38-23-4 S.W. $\frac{1}{4}$ of 2-39-23-4 7-20-38-23-4	Conger Coal..... Eclipse Coal..... Lynass Coal.....	1910 1919 1953
1104 1672	Brooks Area Kleenbim Collieries Ltd..... Coral Coals Ltd.....	Bow City..... Rolling Hills.....	Pts. of 15-17-17-4 148 -3-14-13-4	Birmwel Coal..... Coral Coal, Rolling Hills Coal.....	1932 1946
724 1603	Camrose Area Burnstad Coal Ltd..... Camrose Collieries Ltd.....	Round Hill..... Camrose.....	N. $\frac{3}{4}$ of 6-14-48-18-4 114215-17-46-19-4	Burnstad's Coal..... Camcoal, Camrose Coal.....	1917 1943
53 194 817 921 1283	Carbon Area Alfred Fox..... Nettel Brothers..... Ben Pickering & Sons..... Erich Riesig..... Halbert Coal Mine.....	Carbon..... Three Hills..... Ghost Pine Creek..... Trochu..... Trochu.....	3-11-29-23-4 1429-31-22-4 2 -6-31-21-4 154216-11-33-23-4 8-11-33-23-4	Carbon Sunrise Coal..... New Ghost Pine Coal..... Orkney Coal..... Meadow Bank Coal..... Comfort Coal.....	1898 1909 1919 1921 1928

LIST OF MINES OPERATING DURING

The Year 1961

Character of Coal: Sub-bituminous

mine no.	operator	mine office address	mine location L.S., S., T., R., M.	registered trade name	date of opening
291	Castor Area	Gadsby.....	S. $\frac{1}{2}$ of 11&12-28-39-16-4	Sunset Coal.....	1911
902		O.V. Remillard.....		Remillard Coal.....	1921
1046		Battle River Coal Co. Ltd.....	9-33-37-11-4	Coriel Coal, Vestal Coal, Sterling.....	1922
1248		B.J. Gerla & W. Runge.....	13&16-20-40-15-4	Success Coal.....	1926
1578		Forrestburg Collieries Ltd.....	10&11-29-41-17-4	Diplomat Coal, Ambassador.....	1941
1567		J.K. Mills.....	6-41-15-4	Eagle Coal.....	1942
1644		Stettler Coal Co. Ltd.....	6-22-42-17-4	All-Fire Coal.....	1943
1752		Nitchinson & Remstad.....	11-23-40-16-4	Black Diamond Coal.....	1956
1753		Mageobar Mining Company, Ltd.....	15-28-41-17-4	Tannathin Coal.....	1958
		Champion Area	15-41-40-16-4		
1137	Champion Coal Co. Ltd.....	Champion.....	2&3 -4-16-23-4	Smith Coal.....	1934
1509		Champion.....	4 -3-16-23-4	Champion Coal.....	1937
1402	Drumheller Area	Drumheller.....	7-29-20-4 13-21-29-20-4 1-20-27-18-4	Glocoal, m10-5* Coal, Renown Coal.....	1913
1421		Federated Co-operatives Ltd.....		Hy-Grade Coal, Purity Hard Coal, Jewel Meteor Coal, New Star Coal, Western Crown Coal, Western Monarch Coal, New Murray Coal, New Midland Coal, New Rosedale Coal.....	1933
1573		Amalgamated Coals Ltd.....		Burn Britte Coal.....	1940
1599	Burn Britte Coal Company.....	Delia.....	9-22-28-18-4	Cozy Coal.....	1943
1655		J. Makaruk & Partners.....	9-22-29-20-4	Subway Coal.....	1947
1666		Victory Coal Company.....	15-16-28-19-4	Lion Coal.....	1947
1668		Victor Leonhardt.....	3-17-29-19-4	Atlas Coal, Commander Coal, New Wild Fire Coal, New Murray Coal, Western Gem.....	1948
1742		Century Coals Limited.....	14 -6-27-18-4		1956

LIST OF MINES OPERATING DURING

The Year 1961

Character of Coal: Sub-bituminous

MINES NO.	OPERATOR	MINE OFFICE ADDRESS	MINE LOCATION L.S. S. T. R. N.	REGISTERED TRADE NAME	DATE OF OPENING
720 1266 1582 1656 1727	Edmonton Area Slide Hill Coal Co. Ltd. Black Gem Coal Company Limited. Egg Lake Coal Co. Ltd. Star-Key Mines Limited. Whitemud Creek Coal Co. Ltd.	Edmonton. Nampa. Morinville. St. Albert. Edmonton.	N.W. $\frac{1}{4}$ of 5-51-25-4 N.W. $\frac{1}{4}$ of 36-51-25-4 W. $\frac{1}{2}$ of 36-56-26-4 16, 10 & 11-35-51-25-4 S.W. $\frac{1}{4}$ of 13-52-25-4	Slide Hill Coal. Black Gem Coal. Egg Lake Coal. Star-Key Coal. Red Hot Coal.	1960 1927 1911 1915 1952
1431 1521	Gleichen Area Consumers Mine. Lucky Strike Mine.	Rosebud. Rosebud.	3&6-29-26-21-4 14&15-20-26-21-4	Consumer's Coal. Supreme of The Valley Coal.	1933 1937
1419 1595 1670 1739	Pembina Area Alberta Coal Limited. Dymetro Mines. Warburg Coal Co. Ltd. Charles Ostertag.	Wabamun. Genesee. Warburg. Ertwistle.	2&3-15-53-41-5 N. $\frac{1}{2}$ 5 & S. $\frac{1}{2}$ 12-22-50-3-5 12-13-49-3-5 S.W. $\frac{1}{4}$ of 10-54-7-5	Blue Flame Coal, Victory Coal. Genesee. Pinter Coal. Pembina Peerless Coal.	1913 1960 1918 1954
772	Redcliff Area Ajax Coal Company.	Medicine Hat.	1-6-13-6-4	Ajax Coal.	1918
1413	Sheerness Area Great West Coal Company Limited.	Sheerness.	S. E. $\frac{1}{4}$ of 13-29-13-4	Boselyn, Berry Creek, Volcano.	1915

LIST OF MINES OPERATING DURING

The Year 1961

Character of Coal: Sub-bituminous

MINE NO.	OPERATOR	MINE OFFICE ADDRESS	MINE LOCATION L.S. S. T. R. N.	REGISTERED TRADE NAME	DATE OF OPENING
1604	Taber Area Alberta Coal Sales Limited....	Taber.....	1212-10-17-4	Majestic Coal, Southalta Coal.....	1943
215	Tofield Area Jet Construction Ltd.....	Pyley.....	S. 1/2 of 14-49-18-4	Red Flame Coal.....	1909
1107	Black Nugget Coal Ltd.....	Dodds.....	11-49-18-4	Black Nugget.....	1923
1624	Ryalta Coal.....	Pyley.....	12- 9-49-17-4	Ryalta Coal.....	1945
1517	Westlock Area Thorhild Coal Mine.....	Absee.....	12213-12-60-21-4	Dandy Coal.....	1937
1523	Picardville Coal Co. (1960) Ltd.	Picardville.....	16-35-58-27-4	Picardville Coal.....	1960
1562	North Point Coal Co. Ltd.....	Thorhild.....	1-11-60-21-4	North Point Coal.....	1939
1743	Wetaskiwin Area Blue Bird Coal Company.....	Leduc.....	12213-20-48-25-4	Blue Bird Coal.....	1956
1569	Whitecourt Area A. Watson.....	Blue Ridge.....	16-24-59-11-5	Blue Ridge Coal.....	1940

LIST OF QUARRIES OPERATING DURING

The Year 1961

QUARRY NO.	OPERATOR	QUARRY OFFICE ADDRESS	QUARRY LOCATION L.S. S. T. R. M.	DATE OF OPENING
Q 2	Cascade Area Canada Cement Company Limited..... Loders Lime Company Limited..... Roothills Rock Wool Co. Ltd..... S&L-San Company..... Banif Mining & Quarrying Ltd..... Loders Lime Company Limited..... Canmore Rundle Rock Ltd..... Ribbon Creek..... The Better Rock Company Limited..... Thompson and Nelson..... Thunderstone Quarries Ltd.....	Exshaw.....	Pts. of 27&28-21- 9-5	1906
Q 3		Exshaw.....	Pts. of 25&36-21- 9-5	1906
Q 13		Exshaw.....	Pts. of 19&20-21- 9-5	1957
Q 27		Exshaw.....	7-25- 8-5	1956
* Q 44		Calgary.....	3&5-17-25-10-5	1959
Q 47		Exshaw.....	21-21-10-5	1960
Q 48		Canmore.....	W. 2 L.S. 11&E. 2	1960
Q 50		Seebe.....	Pts. of Secs. 15,16 & 2-23- 9-5	1960
* Q 54		Canmore.....	Pts. of L.S. 6,11,12&13-9-25-10-5	1961
Q 57		Calgary.....	11&14 -7-21- 9-5	1961
* Q 58		Canmore.....	N.E. 2	1961
Q 37	Castor Area Magoobar Mining Company, Limited.....	Rosalind.....	15&16-31-42-17-4	1958
Q 8	Crowsnest Area Summit Lime Works Ltd.....	Crowsnest, B.C.....	Pts. of 7- 8- 5-5	1920
Q 5	Edmonton Area Northwest Ceramics Ltd.....	Edmonton.....	N.E. 2 of 21-53-25-4	1911
Q 22	Inland Cement Company Limited.....	Edmonton.....	Pts. of 15&22-53-25-4	1955
Q 55	Gleichen Area Perry Brick & Tile Co. Ltd.....	Redcliff.....	14- 8-22-21-4	1961
* No Production During 1961.				

LIST OF QUARRIES OPERATING DURING

The Year 1961

QUARRY NO.	OPERATOR	QUARRY OFFICE ADDRESS	QUARRY LOCATION L.S., S., T., R., M.	DATE OF OPENING
Q 56	Morley Area Burtex Industries Limited..... Mountain Park Area	Calgary.....	12&13- 4-25- 5-5	1961
Q 21	Inland Cement Company Limited..... Pakowski Area	Cadomin.....	13-30-46-23-5	1955
Q 34 Q 39 Q 45	Medicine Hat Brick & Tile Company, Limited. Medicine Hat Brick & Tile Company, Limited. Medicine Hat Brick & Tile Company, Limited. Pembina Area	Medicine Hat..... Medicine Hat..... Medicine Hat.....	5,6,11&12-20-8- 3- 4 5-20-8- 4- 4 10&15- 9- 8-4- 4	1957 1959 1959
Q 43	Baroid of Canada, Ltd..... Redcliff Area	Onaway.....	Pts. Secs. 5&8, & Sec. 7-56- 2- 5	1959
Q 4 Q 7 Q 14	Perry Brick & Tile Co. Ltd..... Medicine Hat Brick & Tile Company, Limited. Medicine Hat Brick & Tile Company, Limited. No Area	Redcliff..... Redcliff..... Medicine Hat.....	11&15- 5-13- 6-4 9-13- 6-4 1&2-31-12- 4-4	1913 1913 1950
Q 24	Consolidated Concrete Industries Ltd..... No Area	Calgary.....	3,4&5-32-21-29-4	1956
Q 36	Northwest Ceramics Ltd.....	Edmonton.....	N.E. $\frac{1}{4}$ of 5&6-16-66-22-4 15-34-92-10-4	1958 1959
Q 41	Cities Service Athabasca Inc.....	Edmonton.....		

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